

TITLE OF INVENTION: "HORSE BOOT SLEEVE FOR PASTEREN PROTECTION"

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HORSE BOOT SLEEVE FOR PASTERN PROTECTION

BACKGROUND OF THE INVENTION

5 Field of the Invention

[0001] The invention relates in general to articles of footwear for animals and, in particular, to a protective sleeve for a horse boot.

Description of the Prior Art

10 [0002] Horse boots are used to protect the hooves and fetlocks of horses and are sometimes used in lieu of horseshoes. A horse boot typically includes a sole with opposed flat major surfaces and an upper which projects from one of the major surfaces and forms an enclosure for the hoof, the pastern, and sometimes the fetlock of a horse. The upper typically extends along the rim of the sole and has an edge which is secured to the sole. The upper has a second edge remote from the
15 sole, and such edge is provided with a cuff which can be tightened around the hoof, pastern and fetlock of the horse.

[0003] The upper and cuff are spread in order to put the boot on the hoof of the horse. After spreading the upper and the cuff, the boot is slid over the hoof and the cuff is tightened around
20 the pastern or fetlock, depending on the height of the boot, to secure the boot in place.

[0004] A recent advance in the art lies in a horse boot that is characterized by an upper and a cuff designed to fit over the hoof and wrap tightly over the hairline portion of the pastern without extending upwardly through the pastern and over the fetlock. Such a boot is illustrated in Fig. 1
25 and is disclosed in copending U.S. Serial No. ?, entitled "Horse Boot with Dual Tongue Entry

System,” filed concurrently with the present application and hereby incorporated by reference.

This configuration provides more freedom of movement without diminishing the protection afforded to the hoof and heel bulb. It also prevents the irritation to the fetlock often associated with higher boots that extend over it. Moreover, the boot of Fig. 1, by virtue of being secured in place by fastening the cuff tightly around the hairline portion of the pastern, which is smaller than the hoof below, provides a very stable form of attachment that minimizes rubbing and still prevents the loss of the boot by the horse.

[0005] Because of the lower profile of the boot 10 of Fig. 1, a problem may still develop during use if sand or other small debris accumulates at the interface of the cuff portions 12a,12b,12c with the hairline region HL of the pastern 32. Penetration of such sand or debris into the boot and the subsequent rubbing against the heel bulb of the hoof, a particularly sensitive area, may cause irritation and discomfort to the horse, who may then try to jettison the boot. Therefore, this invention is directed at providing a solution to this potential problem.

SUMMARY OF THE INVENTION

[0006] The invention consists of a protective sleeve intended for use with a boot of the type illustrated in Fig. 1 to provide a resilient layer that prevents penetration of debris accumulated at the interface of the boot with the pastern of the horse, especially at the rear of the hoof. The form of the sleeve is tailored so that it conforms to the natural shape of a typical hoof and pastern without creases or other unnecessary accumulations of material that might provide discomfort to the horse. The lower portion of the sleeve is adapted to wrap around and cover the heel bulb, but not the rest of the hoof, in order to retain the ease with which the boot is put on the hoof of the horse. The upper portion of the sleeve is designed to wrap around the pastern and overlap for fastening with a loop-and-hook strap. The material is selected to be sufficiently resilient and thick to ensure that at no time during use a gap is formed between the boot and the pastern or hoof, so that accumulated sand and the like cannot fall into the boot and rub against the hoof.

[0007] Additional features and advantages of the invention will be forthcoming from the following detailed description of certain specific embodiments when read in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

[0008] FIG. 1 is a perspective view of a boot of the type intended for use with the protective sleeve of the present invention, including the bottom portion of the leg of a horse and the hoof
5 inserted in the boot.

[0009] FIG. 2 is a plan view of a protective sleeve according to the invention.

[0010] FIG. 3 is a perspective view of the sleeve of Fig. 2 wrapped around the hoof and pastern
10 of a horse prior to wearing a boot of the type illustrated in Fig. 1.

[0011] FIG. 4 is a sectioned view of the various layers constituting the preferred embodiment of the resilient material of the invention.

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DESCRIPTION OF THE PREFERRED EMBODIMENTS

[0012] For the purposes of this disclosure, the term resilient is used to refer to a material that is both stretchable and compressible, and is capable of recovering its size and shape after
5 deformation caused by compressive as well as tensile stresses. Referring to Fig. 2, the protective sleeve 20 of the invention consists of a pad 22 of resilient material that includes a lower portion 24 designed to wrap around the heel bulb HB of the hoof H of a horse from the bottom to the top of the hoof, as shown in the Fig. 3. The front of the hoof is left open, so that it may be more easily introduced into the boot 10, or a similar boot that is designed to fasten by wrapping around
10 the pastern P above the hairline HL but below the fetlock F.

[0013] The upper portion 26 of the sleeve 20 is instead sufficiently wide to wrap around the pastern P for fastening of the sleeve on the leg of the horse, preferably by means of a hook-and-loop device partly incorporated into a laterally extending strap 28. The upper portion 26 should
15 not be tall enough to reach the fetlock F of the horse, thereby avoiding any possibility of rubbing against it during use, which is a common source of irritation from tall boots used in the art. The height of the lateral bands 30 (which define the height of the upper portion 26) and the precise shape of the curved cuts 32 joining the lower and upper portions of the sleeve are selected so that the front sides of the hoof and hairline are left uncovered, as illustrated in Fig. 3. On the other
20 hand, the bands 30 should be sufficiently high to be overlapped by the tongue 14 in the front of the boot 10 when it is worn by the horse.

[0014] The material used for the resilient pad 22 of the invention needs to be not only resilient but also sufficiently thick to avoid the formation of gaps between the boot and the pastern or hoof
25 of the horse during use. In the preferred embodiment, the material consists of Neoprene® about one quarter of an inch thick, which proved to be very durable and suitable to prevent penetration

of debris and avoid irritation. As illustrated in Fig. 4, the layer 34 of resilient material is preferably combined with an outer sheet 36 of loop material which can be used to provide a fastening anchor to a strap 28 that bears hook material on its underside. An inner layer 40 of fabric material is also preferably adhered to the Neoprene to provide protection against wear.

5 The product commonly referred to as nylon jersey is preferred for this purpose.

[0015] In the preferred embodiment, which is believed to be appropriate to conform advantageously to the dimensions of most horse hooves and pasterns, the sleeve of the invention has substantially straight top and bottom edges 40,42 about 10 and 5 inches wide, respectively,
10 and an overall height 44 of about six inches. The bands 30 are about two inches tall (thereby defining upper and lower portions 26,24 about two and four inches tall, respectively) and the curvature of the cuts 32 connecting the bands 30 to the bottom edge 42 is progressively more marked towards the top, as illustrated in Fig. 2.

15 **[0016]** While the invention has been shown and described herein with reference to what are believed to be the most practical embodiments, it is recognized that departures can be made within the scope of the invention and, therefore, the invention is not to be limited to the details disclosed herein but is to be accorded the full scope of equivalent articles.